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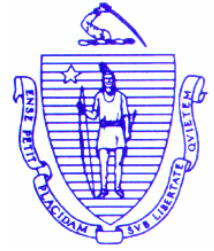
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Re: Comments on the NOI to Prepare an EIS for the Cape Wind Energy Project

The Division of Marine Fisheries (*Marine Fisheries*) offers the following comments and recommendations for your consideration in scoping the EIS for the Cape Wind Energy Project.

Nantucket Sound provides very important feeding, spawning, and/or nursery grounds for many species of finfish and invertebrates, including bluefish (*Pomatomus saltatrix*), striped bass (*Morone saxatilis*), scup (*Stenotomus chrysops*), summer flounder (*Paralichthys dentatus*), black sea bass (*Centropristis striata*), tautog (*Tautoga onitis*), squid (*Loligo pealei*), and knobbed whelk (*Busycon carica*). Further, the success of spawning and juvenile development activities of some of these species in the Sound may impact abundance levels as far down the eastern seaboard as the Mid-Atlantic states due to historic migratory patterns. The commercial and recreational harvest of fish and invertebrates in Nantucket Sound provides tens of millions of dollars in revenue to the local economy and is an integral, indeed historic, part of life in many Cape Cod and Island towns.

General Comments

Review of the ACOE DEIS/R reveals a near total dependence on existing data sets from *Marine Fisheries* and National Marine Fisheries Service (NMFS) resource surveys and reported landings. No effort was made by the applicant to obtain comprehensive, representative, site-specific resource or habitat data, despite the fact that all existing data sets are acknowledged by the State and Federal resource agencies and the applicant to be limited in their scope and resolution. Similarly, there was little attempt to supplement landings data with direct assessment of commercial and recreational activity in the Sound, particularly at the preferred site, with the exception of an extremely limited telephone survey of commercial party boats. The overall level of information provided in the DEIS/R was inadequate to properly evaluate the potential environmental impacts of this large and precedent-setting project and this level of effort is particularly inappropriate

when compared with similar efforts undertaken for the construction and operation of traditional power plants or the recent HubLine gas pipeline project. To facilitate consideration of our specific comments and recommendations, they are grouped by resource and activity of concern.

Fisheries Resources, Benthic Species, and Habitat Characterizations

Acknowledging that the use of existing data sets is an important component of an EIS, the limitations of these data for this purpose were identified by the resource agencies well in advance of the preparation of the DEIS/R. Specific concerns and questions include:

- Fisheries management within Nantucket Sound has been delegated to the Commonwealth under the Magnuson-Stevens Act. As such, *Marine Fisheries*' Resource Assessment trawl survey data is the only long-term data set available for the Sound. However, this survey is conducted only during May and September at randomly selected stations within predetermined depth strata and is not appropriate for use to describe year-round fish occurrence and relative abundance throughout Horseshoe Shoals and Nantucket Sound.
- Trawl gear is of limited usefulness when describing the occurrence and relative abundance of pelagic and benthic species (finfish and invertebrates) not vulnerable to this gear type.
- No gear type is 100% efficient and species occurrence in catches may not be representative of relative abundance.
- Comparisons made between the preferred Horseshoe Shoals site and alternate offshore locations must be made using the same level of data for each site.
- Essential Fish Habitat (EFH) has not been evaluated for many 'inshore' species that are not regulated by NOAA.
- The EFH analyses found in the DEIS/R have been presented as an abstract listing of species and their habitat preferences. Every effort should be made to tie EFH designations from the literature to actual occurrence and relative abundance as documented by survey data and landings.
- As they are managed by the Atlantic States Marine Fisheries Commission (ASMFC) rather than NMFS, important species such as striped bass, bluefish, and fluke are not included in the EFH analyses. As such, the DEIS/R does not adequately describe their habitat requirements nor document their contribution to the high species diversity and ecology of the Nantucket Sound ecosystem.
- Previous characterizations in the DEIS/R of benthic resources and habitat in Nantucket Sound suffer from a lack of comprehensive data and consistent analysis. Horseshoe Shoal is the most prominent bottom feature in Nantucket Sound and as such, likely fills an important role in the overall ecology of Nantucket Sound.
- The limited number of benthic surveys conducted in the Horseshoe Shoals area revealed the benthic community to be highly variable from season to season and location to location. The patchy nature of these data may be due to the presence of 'microhabitats', which would indicate the need for intensive sampling to define these habitats, associated flora and fauna, and describe their functions and values.
- Prior to drafting a new EIS, the applicants should conduct directed resource surveys of sufficient spatial and temporal scale to characterize the marine resources inhabiting (permanent and transient occupation) the preferred and alternative project sites as well as their habitat functions and values.

- Resource and habitat studies should be sufficiently comprehensive to characterize the use of this area by all life stages of relevant commercial and recreationally important species, as well as those species that provide ecological services such as forage.
- The data from these directed studies should be integrated (as appropriate) with existing data sets, landings data, and physical/oceanographic characteristics to produce an accurate characterization of the diversity and abundance of finfish resources in the Sound.
- The design and analysis of required supplemental studies should be coordinated with the appropriate State and Federal resource agencies.

Commercial and Recreational Fisheries

In the ACOE DEIS/R, comparison of fishing activity and landings at the alternative sites within Nantucket Sound, south of Tuckernuck, and in the New Bedford/Buzzards Bay area were compromised by many of the same deficiencies noted for the resource characterizations. The DEIS/R presented incomplete or conflicting data, a reliance on superficial analyses, and the absence of data on private recreational fishing activity and its contribution to the economy. Specific concerns and recommendations include:

- Due in part to differences between the State and Federal landings data sets, catch statistics reported for select species may appear to contradict each other during reporting. In some instances, total landings will understate actual catches, sometimes by an order of magnitude.
- Reported landings cannot be considered a surrogate estimate of relative abundance. Of particular concern is any implication that limited landings reflect low abundance. In addition to relative abundance, catch rates (and landings) in a given year are dependent upon quotas, size and bag limits, seasonal closures, and fishing effort. It is even possible to have low catch rates in a particular year because of high relative abundance, due to management closures brought on by over-fishing in the previous year.
- In view of the many gear types in use in Nantucket Sound and the known variation in reporting at the State/Federal level, it is critical that landings data be analyzed *in toto* (combining all gear types) for a given species to obtain an accurate estimate of harvest. This is especially important if these data are being used as a proxy for species occurrence, abundance, or fishing activity. Reporting landings broken down by individual gear types is not conducive to accurate data analysis, particularly if important gear types such as hook and line (the only commercial gear used to catch striped bass) are omitted from the analysis as they were in the DEIS.
- Another limitation to the use of landings data to describe species occurrence or fishing activity is the fact that fishermen working Nantucket Sound may land their catch in ports outside Nantucket Sound or even out-of-state. Boats that carry Federal permits are required to submit trip reports that indicate the area of the catch, but this information is not currently required of in-state boats or dealers.
- The use of raw data from the NMFS' MRFSS database and or that obtained through directed telephone surveys represent a fraction of the total effort and must be viewed as such.
- Studies of fishing activity should be developed in concert with *Marine Fisheries* and NMFS to quantify effort (magnitude and technique) and landings by area and

season within the areas of interest, as well as the economic contribution these activities make to the local economy.

- Landings data reported by *Marine Fisheries* and NMFS must be integrated into a unified format to allow comprehensive analysis of these data by species as well as gear type used in Nantucket Sound. The reporting of these data must include meaningful discussion of the limitations implicit in these data sets.

Physical Environment and Construction of the Facility

Viewed from the context of potential impacts to fisheries resources and habitat, the sections of the ACOE DEIS/R dealing with the physical environment and perceived construction impacts appear to be based upon incomplete data and analyses. Specific concerns and recommendations include:

- In the absence of actual data, estimates of current velocity were obtained from wave theory models in the DEIS. Given the evolving state of the art for offshore wind technology and dynamic nature of the preferred site, model projections should not be substituted for actual measurements.
- The applicant should conduct directed physical surveys of sufficient spatial and temporal scale to characterize water flow and sediment transport within the preferred and alternative project sites.
- The frequency of coring and grab samples used to support remote sensing of the sediment types in Nantucket Sound does not appear adequate when viewed from the perspective of the HubLine gas pipeline project in Massachusetts Bay. Far more effort went into their characterization of bottom type, yet that project was beset by numerous delays and operational changes as they encountered “unforeseen” conditions during construction.
- No data or models have been offered to support the contention that the distance separating the towers will be sufficient to preclude cumulative/additive changes in water flow or sediment transport due to interaction between the towers.
- Sampling effort at alternative sites must be consistent with that at the preferred site to allow comparison of potential construction impacts.
- The use of models such as SSFATE to predict turbidity plumes must be based on adequate and representative field data.
- Estimates of scour, scour protection recommendations, and recommendations for adequate burial depth for the cable network must be consistent with discussions of the extent of sand movement determined through appropriate data collection and modeling. Additionally, contingency plans in the event of failure will be needed.
- The data from these directed studies should be used to model potential changes to water flow and sediment transport that may result from the installation of the wind towers and cable network, both as individual components and for the facility as a whole.
- The magnitude of potential changes to the physical environment of Nantucket Sound need to be evaluated in the context of proposed sand mining for beach fill projects along the Cape and Islands.
- Construction plans should follow the mandated progression of avoidance, minimization, restoration, and mitigation with regards to environmental impacts.

Evaluation of Impacts to Fisheries Resources, Habitat, and Harvest from the Construction and Operation of the Cape Wind facility

Identification of the numerous and extensive data deficiencies, and the incomplete analyses they support, presented in the ACOE DEIS/R render predictions regarding potential impacts at least premature, if not unsupportable. Evaluation of the potential impacts that may result from the construction and operation of the Cape Wind power generation facility cannot be completed in the absence of adequate site-specific data regarding fisheries resources, habitat, or harvest practices. As such, we request consideration of the following concerns when scoping the new EIS:

- Prior assertions that mobile finfish and invertebrates will simply move to other parts of the Sound with no disruption of their life history during construction of the Cape Wind facility are not supported. Substantial changes may occur in spawning, feeding, and juvenile development of the affected species and these changes may have far-reaching impacts on fisheries in other states as well as impacts on more local species, including birds, that rely upon these resources for food.
- Potential changes in finfish occurrence, relative abundance, and community structure could result if there are large-scale changes to water flow and sediment transport over Horseshoe Shoals as a result of this project. Additionally, the conversion of an open shoals fish community to one that is structure oriented may have a profound impact on the ecology of Nantucket Sound.
- The presence of 130 wind towers, with associated support structures and cable network, may serve to limit or even preclude traditional fishing practices in the project area. These limitations could include:
 - Direct closure of the facility (24 square miles) to fishing and boating for security reasons.
 - Loss of access for fishermen, particularly mobile gear or recreational fishermen seeking to anchor near a wind tower, because of the presence of exposed cables and scour protection structures.
 - Loss of access for mobile gear fishermen due to an inability to maneuver between the towers while towing a net, doors, and ground gear. Such movement will be further restricted by the presence of other boats or fixed gear, especially during periods of low visibility and/or extreme weather.
 - Should a boat get “hung up”, its ability to haul back and free itself may be severely hampered or even prevented by towers or the influence of waves and currents as altered by the presence of the towers.
 - Even if access is not restricted or completely lost, fishing success may be greatly reduced by an inability to follow traditional tows. The target species are not evenly distributed and may not be available between the rows of towers.
 - Many small vessels, including draggers, are fished single-handed, making navigation and fishing between the towers virtually impossible.
 - Recreational fishermen seeking to drift fish or troll in this area will face similar obstacles and may be at greater risk due to closer proximity to the towers.
 - Many concerns have been expressed regarding the ability of the Coast Guard or other authorities to mount a rescue within the tower field, particularly if the sea state necessitates the use of helicopters. As these accidents rarely occur on calm seas during daylight hours, concerns about compromised rescue capability may preclude fishing and navigation in this area.

- Concerns remain regarding potential impacts from vibration, noise, electromagnetic fields, and heat output from the transmission cables. These issues must be addressed with due consideration to the species at risk.
- As well as meeting the baseline data needs, the applicants should be required to prepare appropriate plans for post-construction monitoring, restoration efforts, and compensatory mitigation for unavoidable habitat loss and impacts.
- To address requirements to minimize habitat/resource impacts, the applicants need to coordinate with the State and Federal resource agencies to develop appropriate time-of-year restrictions and plans for the use of containment technologies.
- Previous assertions that there will be no contribution to cumulative impacts in Nantucket Sound because there are no other wind farms being proposed are completely unacceptable. Analysis of potential impacts to fisheries resources, habitat, and harvest activities must include appropriate consideration of on-going and proposed construction activities such as cable installation, dredging, and sand mining. Projects of this nature are or will be under review, including one to remove two million cubic yards of sand from the shoals off the coast of Nantucket.

The Division will continue to provide any assistance needed to address environmental issues related to this project. Questions about these comments may be directed to Vin Malkoski at (508) 910-6318.

Sincerely,



For
Paul J. Diodati
Director

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